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Vol 4 No 44

BBC sales block

ACORN S troubles in the high street have intensified with news that, when existing Acorn stocks are sold, none of the major chain stores at present plan to offer the BBC or Electron over Christmas, with the exception of Dixons/Currys

The original 32K BBC B model is also now virtually unobtainable leading to speculation that the model has been discontinued. This suggestion, has been energetically denied by Acorn.

The Dixons/Currys group is now the only large chain to stock the Electron – at a special pack price of £99.99, which includes a data recorder and software.

The independent specialist retailers still stocking Acorn machines are largely keeping to the BBC Plus 64K and 128K micros. They are now finding it increasingly difficult to obtain 32K BBC's and Electron's.

"The standard 32K BBC still sells very well, but it is extremely difficult to get them because Acorn doesn't seem to be making them any more," said one dealer. "Also, there's not a lot of point in buying Electrons since Greens is selling them at £69 up the road."

This view was reinforced by another retailer: "I can't get the 32K BBC B for love nor money – Acorn seems to have stopped manufacturing them. I haven't been able to get hold of the 128K model yet either, but I'm planning to stock it."

"It is not true that we have stopped making the 32K BBC micro," said an Acorn spokeswoman. "And I would have thought it surprising if high street retailers are not going to buy Acorn machines for Christmas."

Retailers are also concerned at the closeness in

continued on page 9 ▶



The Amstrad Graphic Adventure Creator from Incentive works in similar fashion to the Quill, but both graphics and text can be generated from the same package.

It costs £22.95.

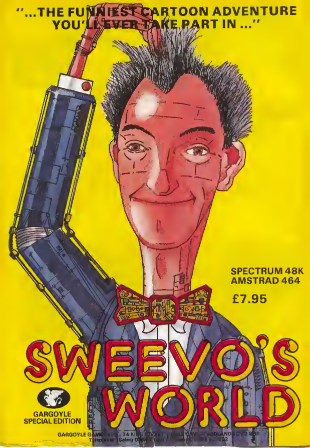
THIS WEEK'S NEWS

- *1570 DISC DRIVE ARRIVES*
- *RUMBELOWS DROPS SPECTRUM*

MICRO MAGIC

Find out if you have won an Amstrad 6128 this week or at least some special *Popular Computing Weekly* cassette labels. Enter your personal Micro Magic number into our special computer program on page 9

INSIDE) PERIPHERALS GALORE IN HARDWARE BONANZA


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CONTENTS

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EDITORIAL

Why is the question of whether the BBC should take advertising such a sensitive one? After all the BBC has been carrying advertising for its own products – BBC publications for example – for years.

Take its involvement with Acorn to produce the BBC micro. Undoubtedly the arrangement helped promote computer literacy. But it also boosted the BBC's profits through substantial royalty payments on every micro sold.

Even now the BBC's frequent programme coverage of a product with which it has a commercial involvement continues. Not just in micro shows either – the BBC micro still crops up in all sorts of programmes across the network's output.

Yet what is this business interest in Acorn doing for the BBC?

Not a lot. Surely it must at least raise questions about the BBC's editorial impartiality. And now, mainly through Acorn's own much publicised financial difficulties the link is becoming almost an embarrassment. Acorn's products are no longer widely available in the high street and sales have plunged because Acorn has priced itself right out of the market. Further, there is little sign that Acorn either has the resources or has any particular wish to provide an on-going family of new BBC micros. Why are there now three BBC models competing only with each other and all widly overpriced? Acorn's strategy for the home computer market is a shambles.

And the BBC is now losing out all round. It should have quietly disentangled itself from the Acorn agreement long ago when its computer literacy project was still bearing educational fruit.

But then, presumably, the money looked too good to turn down. Now even that looks like drying up.

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Computer Trade Association Magazine of the Year

Drive and monitor for C128 emerge

COMMODORE'S new 128 micro has at last gone on sale with the disc and monitor peripherals required to use the machine to the full – and already prices are being discounted

The 1570 disc drive and 1901 monitor units were available for the first time at the *Commodore Horizons* Show held at the Tech West Centre in London last weekend.

Although the official prices for the micro, disc drive and monitor have now been set at £269 99, £199 99 and £299 99, respectively, Commodore's dealer to the show, Cultronics, was offering the hardware at special show prices of £259, £189 and £279 for micro, drive and monitor

Despite the price reduction, bringing the micro/disc drive/monitor combination down by over £40 to £727, this is still over £300 more than Amstrad's CPC 6128

The *Commodore Horizons* Show was well attended with the number of visitors to the two-day event estimated at well over 7,000

Sinclair to 'badge' QL printer

SINCLAIR has now signed an agreement to 'badge a Seikosha printer for the QL

The printer is the same model as the unmarked one which was shown at the *Personal Computer World* show, and will be officially launched at Compec, from November 12-14

The printer is a 9-pin dot-matrix type, with a draft speed of 100 cps and near letter quality speed of 25 cps It will take both continuous and single sheets of paper

Data Distributions will be selling the printer, in black livery, for £249

Holiday package row sparked by Benidorm

FANS of Melbourne House's package holiday adventure *Terrormolinos* may be interested to hear of another title with a remarkably similar plot – *Benidorm* from Little Sofie software

Yet *Benidorm* was written and released on mail order nearly two years ago and *Terrormolinos* was only lanuched this summer

In *Benidorm* a family, father Cyril, mother Beryl, and children Wayne and Jolene set out for their destination from their home in Slough In *Terrormolinos*, the mother too is called Beryl and she and children Ken and Doreen also live in Slough Other features shared by *Benidorm* and *Terrormolinos* include drunken characters and food poisoning and both programs use seaside postcard-style artwork on the packaging

"We wrote Benidorm simply as a spoof, our main line of business being bespoke medical software," said Ray Carney of Little Sofie "I'm annoyed that the *Terrormolinos* people are claiming their idea is totally original."

"I have never heard of this other game," said Peter Jones, co-author of *Terrormolinos*. "Obviously Little Sofie must have thought up the same concept – certainly if you start planning an adventure game set around a Spanish holiday, features of it will fall into place He may have thought of it first or not – we had the idea planned before *Hampstead* appeared "

"I can assure you we published *Terrormolinos* in good faith," said Melbourne House's Paula Byrne "I have absolute confidence in the authors "

Terrormolinos is available for the Spectrum and C64 at £8 95 from most shops, *Benidorm* is available for the C64 on mail order only from Little Sofie at 9 Stubham Rise, Ilkley, W Yorks, for £7 99

L: Terrormolinos artwork. R: Benidorm inlay

Rumbelows drops Spectrum as stores plan Xmas ranges

RUMBELOWS has become the first high street store to discontinue sales of Sinclair computers

It will not make a decision as to whether to restock either the Spectrum Plus or QL until after Christmas.

Rumbelows' Christmas range comprises the Amstrad CPC 464 and 6128, Toshiba's £89 HX-10 package, the Commodore 64 Compendium at £199, and the Commodore 128

The decision not to take the Spectrum Plus over Christmas has a lot to do with Dixons' £139 99 Spectrum Plus package "Dixons seems to have tied up that particular area of the market," said Rumbelows' buyer Terry Greenwood. "We have still got a few in stock but we're not going to do a deal with Sinclair "

Most of the other major retail chains, including Boots, Lasky's, Menzies and W H Smiths, are offering Spectrum Plus packs, very similar to Dixons', for sale over the Christmas period.

Boots will also be stocking the QL, Amstrad CPC 464 and 6128, the Commodore Compendium, Toshiba HX-10 and Atari 130XE over Christmas The Commodore 128 will be sold only in Boots' top 25 stores Laskys is stocking the Amstrad 464 and 6128, Toshiba HX-10, Atari 520ST the *Commodore* Compendium and the C128 Laskys hopes to offer the C128 in two separate packages, one with the 1570 disc drive and one with the disc drive plus Commodore's 1901 monitor John Menzies will offer a printer pack for the QL featuring Seikosha's CP5 printer for £299 99 The QL will also be available on its own at £199 99 Menzies too has the C64 Compendium, Amstrad s 464 and 6128 and interestingly is hoping for some PCW 8256s for Christmas W H Smith has the C64 Compendium and Amstrad 464 and 6128 Dixons/Currys is the only major chain to offer the BBC and Electron machines, in addition to its Spectrum Plus pack, Commodore Compendium and Amstrads 464 6128 and 8256

More news on page 9

shadow of the UNICORN

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Success of PCW8256 threatens shortage

AMSTRAD'S new PCW 8256 looks like being in very short supply this Christmas as demand outstrips supply

Although the word processor cum 256K micro has only gone on sale so far at Dixons and some independent shops, sales are already "easily into five figures", according to one spokesman.

He said, 'It's a 100% unbelievable success It has sold out and created waiting lists all over the place Most people should get their PCW 8256 before Christmas, but it's impossible to tell really "

The success is also threatening to cause a shortage of 3 inch discs "People keep buying two boxes of discs at a time We are just about keeping control but it is a tight situation "

At the launch of the PCW 8256 in August, Amstrad planned to produce 30,000 units of the machine this autumn, and stipulated it would be tailoring both marketing and supply to availability

"The PCW8256s are presold before we get them into stock," said Loretta Cohen of distributor Lightning "There certainly won't be ample stocks of the machine in the next few months "

The Big Apple holds firm

APPLE Computer has announced preliminary financial results of net profits of $61 2m (about £48m) and sales of over $1 918b (£1 475b) for the year ending September 1985

Sales are slightly up from 1984, when they totalled $1 516b (£1 163b) but profits are marginally down from $64 1m (nearly £50m)

Around a third of the profits were earned in the last quarter.

Yes but once you've seen one Spanish resort you've seen them all

Diving deep into the C

LEON Heller – the chairman of Quanta, the QL users' group – is setting up a national C users' group, for those interested in the programming language

Details from Leon Heller, 8 Morris Walk, Newport Pagnell, Bucks, MK16 8QD

Acorn trouble

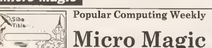
◄ continued from page 1

price between the 64K B Plus and the 128K model The 64K sells for £469 and the 128K for £499

"We're expecting an upgrade kit to be made available at a small cost for the 64K," said a dealer in Avon. "Now that the 128K machine has been launched, interest in the 64K has died down."

The Acorn spokeswoman confirmed the existence of the 64-128K up-grade kit "It is now available for about £30 and the up-grade is carried out by the dealer " she said.

Micro Magic

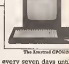




Popular cassette labels

Popular Computing Weekly

Micro Magic


The Amstrad CPC6128

We are giving away an Amstrad CPC6128 128K micro – worth £399 – every seven days until Christmas. Not only that, but every Micro Magic card is a winner – every card wins a runner-up prize of free Special *Popular Computing Weekly* cassette labels

How to find out if you win this week
To find out if you are a prize winner this week this is what you must do

1) Key in the computer program listing printed here into your micro and *Run* the program

2) Input your special **Micro Magic** number as data in the program when requested and press *Enter*

3) The program will tell you if you have won a prize this week and what it is

4) If you have won a prize you can claim it by filling in the coupon on the back of your special **Micro Magic** card **Then send the completed card off to Micro Magic, Popular Computing Weekly, 12-13 Little Newport Street, London WC2H 7PP.**

Don't forget to fill in both your name and address, and also both your winning **Micro Magic** answer from this week and your special **Micro Magic** number

5) If you haven't won this week, don't give up hope Keep your **Micro Magic** card and use it to find out if you win with next **week's Micro Magic** computer program The same card will last you right through to Christmas so don't throw it away – you could miss the opportunity to win


Micro Magic Week 5 Program listing

This week's winning Micro Magic Numbers: 573640 and 336952

If you think you've won complete the form on the back of your Micro Magic card and send it to: Micro Magic, Popular Computing Weekly, 12-13 Little Newport Street, London WC2H 7PP.

Micro Magic cards can only be obtained in line with the criteria outlined by Scot Press. Participants are entitled to only one card each. Cards and accompanying documentation can be obtained free of charge by writing to Scot Press, 12-13 Little Newport Street, London WC2H 7PP

Word power

Program *Protext* **Micro** Amstrad CPC **Price** £19.95 tape, £26.95 disc, £39.95 Rom **Supplier** Arnor The Studio, Ladbury Place, Croydon, Surrey CR0 1ET

With *Protext* Arnor sets out with the intention of improving any CPC word processor available to date and it has done an extraordinarily good job of it. The only professional level competition comes from *Tasword* or CP/M programs.

The disc version of *Tasword* has a super mail merge facility, a spell checker, support from character redesigner programs for Epson and Amstrad printers and has also been released in a new version that uses the 6128's extra memory. None of these extras are yet available for *Protext* but they have been promised and in almost every other way there is a tangible increase in power under *Protext*.

One of the noticeable points is speed – paragraph reformatting for example is almost instantaneous. Secondly almost every command is flexible – you can save and print blocks of text, merge text at the cursor position, find and replace can be case independent or specific, global or local, backwords or forwards, words only or strings within words.

Printer control commands such as line spacing or page length can be embedded in the text, as well as text formatting rulers, comment lines, messages that suspend printing until a key is pressed (for prompting a daisy wheel change for example), soft hyphens (they disappear if the word doesn't cross a line break) the list goes on.

I can't emphasise how good it is and the only feature that can be criticised is that if you have a line length approaching 80 cols it overwrites this by several characters before formatting it on to the next line.

The Rom version allows you 40K of free text file space (even on the 6128) and frees you from having to waste disc space with working copies of the program. It is available in cartridge form for £10.00 extra or as a chip for insertion in any Amstrad compatible Rom board. Don't miss it – it is superb!

Tony Kendle

Head banger

Program *Fighting Warrior* **Micro** Spectrum **Price** £7.95 **Supplier** Melbourne House Castle Yard House, Castley Yard Richmond TW10 6TF

What does Egypt mean to you? Sand, camels, pyramids, sand, the odd animated mummy and more sand? Well, Melbourne House is out to prove otherwise with *Fighting Warrior*.

We're back in with the pharaohs with a plot concerning the rescue of a beautiful princess, but what really matters is that your figure is armed with a stave as he battles with assorted baddies on his sand dance from left to right.

This luck with a stick has a similar, though slightly more limited, variety of movements to his oriental counterpart in *Exploding Fist*; he can duck and jump as well as aiming high mid and low blows. The varied opponents, which include a superb looking dragon, seem to react with a degree of intelligence as they attempt to parry the attacks.

These being ancient times there's a magical element in the shape of vases, the shattering of which may prove beneficial, as well as providing archaeologists with fragments to ponder over in the future! And there are some Cherokees firing arrows from off-screen right adding to your problems.

With its superb animation and high playability this is another sure fire winner for Melbourne House's single-handed combat division, and it's even got the Spectrum to produce a reasonable sound of crunching bone. While not so original as *Exploding Fist* it should still have you battling for hours on end.

John Minson

Dog dodge

Program *One Man and His Droid* **Micro** Spectrum **Price** £1.99 **Supplier** Mastertronic, 8-10 Paul Street, London EC2A 4JH.

Arr – I remember the old days when we 'ad dogs and 'erded sheep and they made boring computer games about it for vast prices. Well now we 'as droids to tend the flocks and this 'ere game costs a lot less and it's a whole lot of original fun.

The problem with ramboids, as these intergalactic woolly 'eads is called, is that they only live for twenty minutes, so it's a race against time, and your first problem is to dodge across the field where they're all bounding 'ither and thither.

Once you's made the caverns where they live you 'as to find them and round them up – in the right order, mind – to the teleport. You let one get in before 'is time and you'll 'ave to start all over again.

How these space sheep are as stupid as their earthbound cousins but luckily they follow just two patterns of movement so you can usually guess where they'll go next.

Still, you'll need your droid's ability to dig 'oles and lie in wait and, 'is tunnelling skills, so that 'e can divert them where you want them. And once you is cleared one cavern there's another nineteen to go.

It's a good job though, calling for a fair bit of strategy. I don't mind saying that us shepherd's are decidedly undervalued if that's 'ow cheap you can buy us.

And now I'm off to listen to *The Archers* because old Dan's 'aving a bit of trouble with 'is new neighbours from Altair 3.

John Minson

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For the birds

Program *Orm and Cheep: The Birthday Party* **Micro** Commodore 64 & 128 **Price** £7 95 **Supplier** Macmillan Software, 4 Little Essex Street, London WC2R 3LF

Orm and Cheep are a double act who wow the kindergarten crew with their television series, which could explain my ignorance of their antics Orm is a worm (literally) while Cheep, his feathered friend, spends his time flapping and chirping

Today is Orm's birthday and Cheep is flapping around and panicking instead of eating the worm like any self-respecting bird. He has to drop the ingredients into the right jars, find his friends and seat them. On this showing, I wouldn't employ him as my social secretary

With a little help from you he should succeed though and Macmillan says the game will delight kids of all ages so don't try to shirk your responsibility! The first bit's a doddle – just remember which of four jars contains what. The search for guests – who probably run like mad when they hear Cheep's incessant chirruping – is a journey along screens of paths and even into the subterranean world of the mole Gather the right friends and when you encounter the non-U animals, such as rat, cat or crow, you can scare them off The last logic test is considered such fun that you have to do it twice

Apart from my antipathy to the characters – and I'm sure I'd love them if I was seven again – the game is badly presented. The instructions are unclear and it took several readings before I even knew what to do The middle section is the most interesting and introduces simple mapping to children but despite its clever use of single key inputs it seems to drag on wearily By the time Cheep and three friends have slid along a path even fans will be nodding off

The initial reaction tester, to determine difficulty level, is a good idea and the whole package could have been a useful arcade learning tool but it's unlikely to hold the attention, . . and that applies to kids of any age, Macmillan!

John Minson

Zat all?

Program *Zyto* **Micro** Commodore 64 **Price** £3 99 **Supplier** Rabbit 2-4 Vernon Yard, 119 Portobello Rd.

I am not sure about this one, it's a sort of cross between *'Moon Buggy'* and *'Defender'*, with some adventure and logic problems thrown in. The aim of the game is to penetrate the six levels of the planet Zyto in your combined truck and rocket to collect pieces of a bomb, which once assembled, will blow up the protective walls of the subterranean city, thus allowing you access through to shoot the now defenceless habitation into submission

The bottom of the screen contains all the usual guages for monitoring fuel, ammo, objects carried, score and time, along with messages which tell you the amount of damage your ship is sustaining through hostile fire or flying into rock walls, which is almost impossible not to do Next are electric charges which form the logic puzzles consisting of patterned squares, turned off by flying through them at full speed The trick is to find out which squares turn off which patterns, because flying through a patternless square will turn it on again. All squares have to be blank to allow you to continue past It's all rather confusing and the instruction insert isn't very revealing

Graphically the game is quite nice, with some neat sound effects and large sprites and the price is very fair

Andy Moss

Speed hills?

Program *Mcoder III* **Micro** Spectrum **Price** £12 95 **Supplier** PSS, 452 Stoney Stanton Road, Coventry CV6 5DG

The theory: While machine code sprints like a hare, Basic creeps like a snail A compiler produces code from the Basic program.

Set against this, most compilers demand a much reduced Basic They are unable to convert every Basic command into *code*, often decimal fractions and string handling *Mcoder III*, claims to handle virtually the whole language so that 'off the peg' Basic programs can be sped up.

Loading is in two stages to check Basic then transform it, errors necessitate reloading of both the source and *Mcoder*

The practice: What better way to test these claims than to dust off a book of listings and type in a hitherto tortoise like arcade game? Ninety minutes later I'm ready to compile but *Mcoder* isn't. Try as I might I can't see why it won't handle a High Score Table

There's no help in the scanty documentation, and while some programs had an appreciable speed increase, this unhelpful atitude to error trapping spoils what is probably a good choice – if it fails to behave, pester PSS

John Minson

In tune

Program *Shadowfire Tuner* **Micro** Spectrum/Commodore **Price** £3 95 **Supplier** Beyond Software, Durrant House, Herbal Hill, London EC1R 8EJ

If, like me, you are one of those people who absolutely raved about *Shadowfire*, but lacked the necessary guile and patience to finish it properly by capturing General Zoff and saving Ambassador Kryxix, or if you are a keen follower of Tony Kendle's page and are waiting for him to come up with some *Shadowfire* pokes – wait no more, for here comes the cavalry in the shape of the *Shadowfire Tuner*

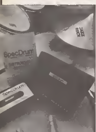
This is a very clever marketing tool, because it lets you play around with the program changing almost anything you want, thus allowing kids to create their own gme against each other

The whole 'tuning' procedure, like the main game, is icon driven and initially you are presented with the 'ship' screen which allows you to view the whole *Shadowfire* or Enigma craft. From this screen you decide where to place the objects and characters in the game and change the characteristics of each. For example, the weight of every item can be adjusted, personnel can be added and patrol routes changed along with doors both locked and unlocked.

When you have your own set up, the standard *Save game* procedure can be used to enable you to load it into the game in the usual way. Files created by the *Tuner* are fully usable and interchangeable with those created by the *Shadowfire* program, so a previously saved game can be modified

Personally, I intend to do away with all the guards so I can have the satisfaction of walking Manto straight to Zoff and winning the easy way!

Andy Moss



Chik, toosh, shak!

Hardware *Specdrum* **Micro** Spectrum **Price** £29.95 **Supplier** Cheetah Marketing, 1 Willowbrook Science Park, Crickhowell Road, St Mellons, Cardiff

Cards on table time I am biased towards all things musical on micros because it seems to me to be one of the genuinely fun things micros can do

Whereas it is now quite cheap to get yourself a useful little Casio keyboard, the preset drum sounds are usually useless Almost without exception drum sounds on the cheap keyboards are so irredeemably neanderthal, idiotic and plastic sounding that only those people whose ultimate objective in musical life is to play *When the Saints Go Marching In* will find it satisfactory

Conversely, though, decent drum machines can cost you £300 plus

Cheetah has now produced an answer Specdrum gives you, in conjunction with a Spectrum, an excellent drum machine that uses sampled sounds (real drums digitally encoded) which can be played either in real time or notated using a simple screen editing system.

The Specdrum system comes with a 'kit' of eight sounds – bass drum, high hat open, high hat closed (chik and toosh respectively) hand claps (shak), snare (thwak) cowbell (chung), mid tom (thom), low tom (domp) and hand claps (krkkk) Up to three of these sounds can be used simultaneously but in fact the illusion of everything happening at once is quite possible with a bit of smart programming around the beat

The software that gives you control of all this is mainly excellent The display lets you choose a song to work on and name it, starting either from scratch or loading in saved drum patterns from tape Composing a song (which means an ordered sequence of different patterns) is a matter first of crating the individual drum sections then structuring the completed patterns according to the layout of the music you want to use them with.

The pattern creation section works in two ways You can either work in real time, choosing and inserting each different percussive beat and building up a complete pattern over a specified number of bars or you can enter each beat using cursor keys on a simplified equivalent of a musical stave.

The excellent part of all this is that the real time and notation ways of working are completely interrelated – your real time drum inputs are automatically notated for you so it is possible to mix the different kinds of inputs easily This means that the easy-to-play bits like a regular snare pulse can be quickly tapped out in real time and some tricky twiddly bits can be carefully notated.

The individual patterns are then 'filled' and numbered and then *Saved* to tape

The only criticism I have of the software is that there are some occasions where you go into sub menus and discover that options that are not currently available stay on the screen, eg, often option D for drum play is shown, but pressing D won't do anything until you have 'returned' from some sub menu. It's basically a small point.

The sounds are excellent and it does help if you have a decent amp or hi fi. You'll will need some sort of amplifier whatever you do though – the Specdrum sends its sound signal out via a standard phono lead

There is promise by Cheetah too, of other sounds on tape for around £3 to give you a totally different kind of drum section

You can even synchronise your Specdrum to other instruments – it will produce a click impulse into the Spectrum Mic socket. This pulse – put into a multi track or on to tape could form a click track to trigger Sequencers but the manual is unfortunately very vague on this point I think you'd need a sync box though – the manual is not helpful on this point and I'd have welcomed a lot more information.

This peripheral should be treated with unrestrained glee by Spectrum owning music buffs

A decent drum machine for £29.95? Ridiculous!

Graham Taylor

Turbo or not Turbo

Hardware *Turbo 50 cartridge* **Micro** Commodore 64 **Price** £39.95 **Supplier** Robcom, 36 Market Place, London NW11 6JP 01-209 0118

In a sense this isn't a hardware product at all, since the Turbo devices are simply standard commodore-type Rom cartridges The routines they contain, however, are something special; a range of utilities and new Basic commands which transform the C64

The Turbo range consists of five cartridges Turbo 50 is a compendium of the other four, which contains all the utilities available in the range

Turbo 50 uses no memory, and will not interfere with 99% of Commodore programs Should it be necessary, you can use *Quit* to deactivate the cartridge, without having to disconnect it from the cartridge port.

Typing *Show* brings up a menu of all the new commands available in several sections The Basic toolkit is impressive enough, including preprogrammed function keys giving *Autoload*, *Quit* and *Run*, and so on, *Auto-line number*, *Delete line*, *Find string*, *Highlight error*, *Retrieve old program*, *List by page*, *Renumber*, *Change screen colours*, *Hex/dec conversion*, *Auto key repeat*, *Reset*, *Trace*, and more commands

The fast cassette routines allow Basic programs to be saved in a form which will load up to ten times faster than normal, a boon to programmers fed up with the lethargic Commodore data cassette There's also a *Merge* facility for combining sections of program. Fast disc *Save/Load* routines, a command to get a disc directory, format a disc, scratch a file, rename files, validate discs and reset the drive are included, as are commands to change device numbers

That's just the start. Printer commands include Centronics interface software allowing you to use your C64 with a non-Commodore printer, a *Col* command to allow you to define the column width, and translation routines for the Commodore graphic characters There's also a machine-code monitor with over thirty commnands, which uses only 4K

It seems that there should be something here which will be of use to any Commodore 64 user For the cost, the Turbo 50 seems the best option even though the others are cheaper; Turbo 10 contains everything but the fast disc routines and monitor Turbo 20 has just the monitor Turbo 30 has everything but the Centronics software and monitor; Turbo 40 has everything but the fast disc routines and Turbo 50 has the lot.

The Turbo series go a long way to overcoming many of the limitations of Commodore Basic, Dos, and interfacing

Chris Jenkins

No toy

Hardware *AMX Mouse* **Micro** Amstrad CPC range **Price** £79 **Supplier** Advanced Memory Systems, Green Lane, Appleton, Warrington, WA4 5NG

The AMX mouse system made its first appearance for the BBC micro and its transition to the Amstrad is not surprising since the two machines have a very similar graphics resolution. What is especially encouraging is that in the months since it first appeared AMX have managed to prevent it becoming dismissed as an expensive toy by producing an impressive range of BBC support software to make use of the hardware's abilities, and the same is planned for the Amstrad.

To set up the system you just fit a box into the joystick socket which is powered via a cable fitted to the monitor-to-computer lead. The box has on its side a BBC-style port into which the mouse itself, presumably unmodified from the BBC version, plugs. Movement of the mouse is then translated into interrupt-driven cursor control codes.

The essential software is a piece of code that installs several RSX extensions to Locomotive Basic and these allow you to set up windows, move icons and pointers (smoothly and at high speed), detect cursor position on screen and read which of the three mouse buttons are pressed – in short all you need to set up a windows/icon-driven program of your own. Because of the lashings of spare memory offered by the CPC compared to the BBC B in high res, software is supplied on cassette but AMX also offer a Rom version which would allow you to use the routines with large programs or, to a degree, with commercial releases such as *Amsword*.

The RSX's mean that you have a remarkably simple to use, but immensely powerful system. The potential of it is illustrated by the fact that the pattern designer, icon designer and *Amx Art* programs that are also supplied on the tape and which are all fast, flexible and very impressive, are written in Basic and can be modified or added to as you wish.

The two designer packages are extremely easy and satisfactory to use and really need little explanation – rather as in an UDG designer you move over a large grid setting the squares to black or white as necessary whilst a small image of the icon changes to show you the result. *Art* is a different kettle of fish altogether – designed to emulate programs such as *MacPaint* and is very good indeed for certain free hand effects using pencil or spray-gun icons, texture filling etc. As a serious artist utility it suffers most from the lack of a magnify option to allow precision drawing and in not allowing you to use the entire screen to draw but some of AMX's demo pictures are truly breathtaking.

Further releases planned are utilities that let you add colours, in many thousands of different shades produced by stippling, to the drawings you have produced using *Amx Art*, *Amx Desk* which provides icon-driven calculator, diary and memo pad functions and also a *Pagemaker* utility for composing A4 sheets for club magazines etc.

Together they add up to one of the most impressive, and certainly the most original, Amstrad peripherals I have seen.

Tony Kendle

Picture this

Hardware Enterprise/Fidelity TV Monitor **Price** £229.95 **Micro** Various **Supplier** Enterprise Computers, 31-37 Hoxton Street, London N1 6NJ

There are a number of good reasons for buying a monitor for your micro ranging from the relatively frivolous, such as the brighter explosions when you zap the aliens, to the crucial – ever try reading 80-column text on a wobbly TV picture while word processing?

There is, however, one good reason for not buying one – cost. Recently though the combination colour television/monitor has set out to change all that. For little over the price of a second telly you can also have the advantages of direct RGB input.

The Enterprise TV monitor is sensibly not dedicated to its namesake computer but via its 21-pin SCART type Euroconnector socket can enliven the displays of a variety home micros, with leads available for BBC, Commodore, Oric, Dragon and Atari. An interface should also provide for the Spectrum. In fact it takes very little investigation to learn that this is a badge version of the 14 inch screen Fidelity CTM 1400.

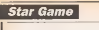
Television performance is well up to standard, even with a set-top aerial, thanks to the AFC switch and computer signals received through this socket are still clear and bright though tuning may prove a little tricky. But it can be instructive to switch from this to direct RGB input. I used an Enterprise 128 and certainly the micro's hi-res graphics and colours took on a brighter, sharper quality.

I then moved on to some word processing with no trouble at all reading the 80-column text. The tube is fully corrected for pin-cushion distortion, which is important in text modes and isn't always the case with older TVs.

Sound is also channelled through the monitor and, while 2 watts output should put many computers' internal speakers to shame.

A handsome piece of equipment and despite my quibble about the control flap it represents good value, especially as it may be discounted by up to £30 in certain places.

John Minson



Bonfire Party

Make your political statement with this program for the Spectrum 48K by Andrew Bird

This week, as Bonfire Night approaches, we give you the chance to recreate the events of that infamous November the 5th. In this game, you must move Guy Fawkes around the screen to collect the eight barrels of gunpowder... however, one of the barrels has split and you are leaving a trail of gunpowder behind you... and the end of the trail seems to have caught fire

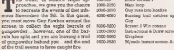
Program Notes

Line No	
1-70	Initialise variables etc
100-900	Draw screen 1
1000-2050	Main loop
3000-3090	Guy runs into bonfire
4000-4080	Burning trail catches up with Guy
5000-5200	Screen 2 Win routine
7000-7800	Instructions & Draw screen 2
8000-9060	Graphics
9500-9530	M/code instant screen & sound

Variables

m1, m2 m3	Machine code routines
Dim x, Dim y	Records trail
trail	Speed of burning trail
t1, t2	Parts of trail drawn & burning
gp	Number of times gun powder collected
g$	Displays gp
a, b	Position of Guy Fawkes
i$	Instructions
p	Used to draw towers
data	Used to read data
f, n, d	General purpose loops

NB Underlined capital letters in the listing should be entered in graphics mode





```
1 REM  Guy Fawkes Night
2 REM  By  Andrew Bird
...
99 REM  Draw screen 1
...
8999 REM  Reach screen END
```

After the overture

Cy Noble continues his music creator for the Beeb

This week we continue with the music creation program for the BBC. The third and final part of the listing will be printed next week.

Please note that to save an envelope you will need to go to the envelope designer menu where you can save or load envelopes separately. Remember to do that before you leave the program. It would be a shame to write your tune using envelopes you've created and be unable to play it back later because you forgot the envelopes to go with it.

'R' <*return*> will repeat any given sequence of notes, tacking them on from the last note written. You will be asked for the numbers of the first and last notes to be copied. 'B' will stop play back if you hold it down for a while when music is being played back.

You are asked for *channel*, *envelope* or *volume*, note value and length for each note and the note is immediately played and confirmation requested. If okay you go on to the next note. All the above menu options work only on the first parameter, *channel*. If you have some sheet music handy you can use that. The note window will give you the values for the note and if you use a length value of eight for quarter notes in 4/4 time (or 6 in 3/4 time) then the rest is a piece of cake. There is a maximum of 255 notes provided for and that should be ample for most purposes. Remember the Beeb requires eight bytes per note, so 250 notes takes up 2K bytes of memory, a sizable fraction of the whole, especially if your tune is going to be used in a *Mode 2* game.

The whole program is menu driven so should not be difficult to use even for a beginner. However, the program is lengthy and complex but that is unavoidable. If you type it in exactly as written it will perform as described – otherwise you could have some very frustrating debugging to do!

```
1160DEFPROCboob:LOCAL I
1170PRINT "You made a boo-boo"
1180VDU7:I=INKEY(200)
1190VDU11:PRINTSPC(29);
1200ENDPROC
1210:
1220DEFPROCyesno
1230PRINT "Okay ? (Y/N)"
1240*FX21,0
1250Y%=INSTR("Yy",GET$)
1260ENDPROC
1270:
1280DEFPROCload:LOCAL F,L%,I%,J%,S%,S2%
,F$
1290CLS:*FX21,0
1300PRINT"<RETURN> to escape"
1310PRINT"* for catalogue"
1320INPUT"Name of tune please ",F$
1330IF F$="" ENDPROC
1340IF F$="*" PROCcat:GOTO1290
1350PROCyesno
1360IF Y%=0 PROCload
1370PROCcassette("PLAY")
1380F=OPENIN F$
1390notes%=BGET#F
1400FOR I%=0TO notes%-1
1410J%=0
1420S%=BGET#F
1430S$=STR$~S%:IFLEN S$=1 S$=MID$(S$,1,1
)+"0"+MID$(S$,2,1)
1440N%(I%,J%)=EVAL("&"+S$)
1450FOR J%=1TO3
1460N%(I%,J%)=BGET#F
1470REM PTR#F=PTR#F+1"
1480NEXT:NEXT
1490CLOSE#0
1500LFLAG=notes%
1510ENDPROC
1520DEFPROCcat
1530PROCcassette("PLAY")
1540VDU14:*CAT
1550PROCyesno:VDU15
1560ENDPROC
1570:
1580DEFPROCloadenv
1590LOCAL env$
1600CLS:*FX21,0
1610PRINT"<RETURN> to escape"
1620PRINT"  * for catalogue"
1630INPUT"Name of Envelope file to load
",env$
1640IF env$="" THEN 1710
1650IF env$="*" PROCcat:GOTO1600
1660PROCyesno
1670IF Y%=0 PROCloadenv
1680PROCcassette("PLAY")
1690lo$="LO."+env$+" 8C0"
1700OSCLI lo$
1710CLS:*MOTOR 0
1720ENDPROC
1730:
1740DEFPROCsaveenv:CLS
1750LOCAL env$,sa$,envnumber
1760PRINT"<RETURN> on its own to escape
"
1770INPUT"Name of Envelope file to save
" env$
1780IF env$="" THEN 1850
1790INPUT"Highest Envelope number ",env
number
1800PROCyesno
1810IF Y%=0 PROCsaveenv
1820PROCcassette("RECORD")
1830sa$="SA."+env$+" 8C0 "+STR$~(&8C0+(
16*envnumber))
1840OSCLI sa$
1850CLS:*MOTOR 0
1860ENDPROC
1870:
1880:
1890DEFPROCsave
1900LOCAL I%,J%,S%,tune$
1910CLS:PRINT
1920PRINT"Name that tune (for the file)
"
1930PRINT"<RETURN> on its own to escape
"
1940INPUT,tune$
1950IF tune$="" THEN 2150
1960IFLEN(tune$)>7 tune$=LEFT$(tune$,7)
:PRINT"Too long; shortened" "it to ";
1970PRINTtune$
1980PROCyesno
1990IF Y%=0 PROCsave
2000PROCcassette("RECORD")
2010F%=OPENOUT tune$
2020BPUT#F%,notes%
2030FORI%=0TO notes%-1
2040J%=0
2050S1%=N%(I%,J%) MOD256
2060S2%=(N%(I%,J%) DIV256)
2070IFS2%>0 S2%=S2%*16
2080S%=S1%+S2%
2090BPUT#F%,S%
2100FORJ%=1TO3
2110BPUT#F%,(N%(I%,J%))
2120NEXT
2130NEXT
2140CLOSE#F%
2150CLS:*MOTOR 0
2160ENDPROC
2170:
2180DEFPROCrepeat:LOCAL F%,I%,L%,b%
2190INPUT"Number of first note ",F%
2200INPUT"Number of last note ",L%
2210PROCyesno
2220IF Y%=0 ENDPROC
2230FOR b%=0 TO L%-F%
2240FOR I%=0 TO 3
2250N%(notes%,I%)=N%(F%,I%)
2260NEXT
2270notes%=notes%+1:F%=F%+1
2280NEXT
2290PROCplayback(0,notes%)
2300ENDPROC
2310:
2320DEFPROCedit(C%):CLS
2330LOCAL G$,chan$,channel,env,note,len
gth
2340IF C%>0 THEN 2370
2350PRINT"EDITING"
2360INPUT"No. of note to edit  C%
2370CLS
2380PRINTTAB(0,0);C%;
2390PRINTTAB(4,0);"&";~N%(C%,0)
2400PRINTTAB(10,0);N%(C%,1);
2410PRINTTAB(15,0);N%(C%,2);
2420PRINTTAB(20,0);N%(C%,3)
2430PRINT:PRINT
2440SOUND N%(C%,0) MOD256,N%(C%,1),N%(C
%,2),N%(C%,3)
2450INPUT"Channel &",chan$
2460channel=EVAL("&"+chan$)
2470INPUT"Envelope or Volume ",env
2480INPUT"Note value ",note
2490INPUT"Length ",length
2500SOUND channel MOD256,env,note,lengt
h
2510PROCyesno
2520IF Y%=0 PROCboob:GOTO 2390
2530N%(C%,0)=channel:N%(C%,1)=env
2540N%(C%,2)=note:N%(C%,3)=length
2550PRINT "Any more to edit ? (Y/N)"
2560*FX21,0
2570IFINSTR("Yy",GET$)>0 PROCedit(0)
2580IF b%>5 b%=C%-6
2590ENDPROC
2600:
2610DEFPROCplayback(b%,notes%)
2620LOCAL N%,t%
2630IF b%>0 t%=0
2640CLS
```

```
2650FORX%=4TO7:AY=21:Y%=0:CALL&FFF4
2660NEXT
2670t%=0
2680REPEAT
2690IF b%<>0 AND N%(b%,0)>4 b%=b%-1
2700IF b%<0 b%=0
2710UNTILN%(b%,0)<4 OR b%=0
2720FORS%=b%TOnotes%-1:*FX21,0
2730I=INKEY(10):IF I-ASC"@" S%=notes%-1:GOTO2780
2740PRINTTAB(0,t%);S%;TAB(4,t%)"&";~N%(S%,0);TAB(10,t%);N%(S%,1);TAB(15,t%);N%(S%,2);TAB(20,t%);N%(S%,3)
2750SOUND N%(S%,0),N%(S%,1),N%(S%,2),N%(S%,3)
2760t%=t%+1:IF t%>17 t%=17:PRINT
2770GOTO2790
2780IFS%=notes%-1 THEN FORX%=4TO7:AX=21:Y%=0:CALL&FFF4:NEXT:GOTO2800
2790IF t%>17 t%=17
2800NEXT
2810ENDPROC
2820:
2830DEFPROCbput(N%)
2840BPUT#F%,N%
2850BPUT#F%,0
2860ENDPROC
2870:
2880.
2890DEFPROCinsert(I%):CLS
2900IF I%>0 I%=I%+1:GOTO2950
2910LOCAL N$,C,E,G,L,N,A%,B%
2920INPUT"Number of note next" "note wil l follow ",N$
2930IF N$="" ENDPROC
2940I%=VAL(N$)+1
2950PRINT "Preceding note number ";I%-1
2960PRINT'"Channel=";~N%(I%-1,0)
2970PRINT"Envelope=";N%(I%-1,1)
2980PRINT"Note value=",N%(I%-1,2)
2990PRINT"Note length=";N%(I%-1,3)
3000SOUND N%(I%-1,0)MOD4,N%(I%-1,1),N%(I%-1,2),N%(I%-1,3)
3010PRINT
3020PRINT"Insert note number ";I%
3030INPUT "Channel & ,C$
3040IFC$="" THEN C=0:GOTO3060
3050C=EVAL("&"+C$)
3060INPUT"Envelope=",E
3070INPUT"Note please", N
3080INPUT"Length please",L
3090PRINT  "Correct ? Y/N"
3100SOUND C MOD4,E,N,L
3110PROCyesno
3120IF Y%=0 ENDPROC
3130FOR A%=notes% TO I%+1 STEP-1
3140FOR B%=0TO3
3150N%(A%,B%)=N%(A%-1,B%)
3160NEXT:NEXT
3170notes%=notes%+1
3180N%(I%,0)=C:N%(I%,1)=E
3190N%(I%,2)=N:N%(I%,3)=L
3200IFI%<6 I%=6
3210PROCplayback(I%-6,notes%)
3220ENDPROC
3230:
3240DEFPROCdelete(N%):CL
3250LOCAL I%,J%:*FX21,0
3260IF N%>0 THEN 3280
3270INPUT"Number of note to delete ",N%
3280PRINT"Confirm delete ";N%;" Y/N"
3290PROCyesno
3300IF Y%=0 ENDPROC
3310FOR I%=N% TO notes%
3320FOR J%=0TO3
3330N%(I%,J%)=N%(I%+1,J%)
3340NEXT:NEXT
3350notes%=notes%-1
3360ENDPROC
3370:
3380DEFPROCsync:LOCAL S%,I,note
3390INPUT"How many notes in the chord",S%
3400IF S%=0 ENDPROC
3410IF S%>4 PRINT"Stupid ! 4 notes max.":GOTO3390
3420FOR I=0TOS%-1
3430INPUT"One of the note numbers ",note
3440H%(0,I)=note:NEXT
3450FOR I=0TOS%-1
3460N%(H%(0,I),0)=N%(H%(0,I),0)MOD256
3470N%(H%(0,I),0)=N%(H%(0,I),0)+&100*(S%-1)
3480NEXT
3490PROCplayback(note-S%+1,notes%)
3500ENDPROC
3510:
```



Central Hall, Westminster, 22nd-23rd November, 1985.

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RAMCO
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Change your standards

Connect your Commodore 64 up to a Centronics printer with the help of a soldering iron and ***Eric Degheye***

Those of us who have used the MPS 801 printers and their equivalents on the Commodore 64 know about their limitations So a logical choice is to buy a better printer such as an Epson and use it instead. But there is one big problem Commodore has not provided anything else than the serial interface to hook printers on The problem can be solved by the purchase of a serial Centronics interface, but the price of these can be prohibitive Another solution is to buy a cable that runs off the user port into a Centronics plug This will work only with software which has provisions for such a setup, such as *Easyscript* or with the software supplied with the cable

To most of us including myself in a previous programming life the ins and outs of how all this works was a mixture of technical wizardry and incomprehensible software But after many a sleepless night and gallons of coffee all this became quite simple In order to understand how a parallel interface works, a bit of background theory is necessary If you just want to get on with it and build the interface, skip the following paragraphs

The parallel interface

A eight bit number consists of a combination of eight electrical pulses, a '0 is represented by about 0 volts and a '1 by about five volts There are two ways of communicating these pulses one pulse at a time, so to transmit an eight bit digit, you need a succession of eight pulses travelling on one wire (in theory), or all eight pulses at a time requiring eight wires in total, one for each pulse The former method is known as 'serial', the latter as 'parallel' I'll let you guess why

A Centronics interface is in fact a parallel way of transmitting data But you need more than eight wires to communicate with a printer First the printer must have a reference timing from the computer, which is supplied by the *Strobe* output, then the printer also wants to know what the computer uses as ground voltage level, and finally, the printer must be able to tell the computer when it is ready to receive the next byte The communication goes as follows the computer checks if the printer is ready by looking at the *Aknlg* (acknowledge) line If this is satisfactory, it sends the data on the eight wires When the printer receives these, it changes the state of the *Aknlg* line to tell the computer not to send more data, processes the data it has just received and when it has finished changes the *Aknlg* line again to let the computer know it is ready to accept more data.

On the C64 user port the *Strobe* and *Ground* lines are present All we need to do now is to define which lines we are going to use for data and the reception of the *Aknlg* signal

The software

I have included two programs, one in 6502 source code for those who want to do it the hard way and understand *how* it works, and a Basic program for the not so courageous ones who just want to get it going The Basic program takes care of everything just load it and run it when you switch the computer on and that's it The printer can be enabled or disabled by just typing '%' or '&' and *Return*, it has the same effect as typing *Open 4 4 CMD 4*, but unlike the *Close 4*, the '&' command does terminate all output to the printer

So much for the software side of things, next week we finish with the construction of the cable and its instructions for use

Assembly Listing

```
;-----
; THIS ROUTINE OPENS THE PRINTER CHANNEL
;-----
OPEN       LDA #<OPR              ;REROUTE OUTPUT ROUTINE
           STA VECOUT
           LDA #>OPR
           STA VECOUT+1

           LDA #$7F
           STA CIAICR              SET CIA INTERRUPT CONTR REG
           LDA #$FF
           STA $DD03               SETS DATA DIRECT REG TO O/P
           LDA #$0
           STA DPR
           JMP INTERP              GO BACK TO BASIC CONTROL
;
;-----
;HERE ALL THE CLOSE ROUTINE DOES IS TO
;PUT THE OUTPUT ROUTINE VECTOR BACK TO ORIGINAL
;-----

CLOSE      LDA #$CA                RESETS THE O/P VECTORS
           STA $0326
           LDA #$F1
           STA VECOUT+1
           JSR $0073
           JMP INTERP
;-----
;THE HEART OF THE BEAST
; THIS IS WHERE ALL HAPPEN
;WHENEVER A CHARACTER IS OUTPUT, CONTROL IS
; GIVEN TO THIS ROUTINE
;IT GETS THE CHARACTER TO BE PRINTED PUSHES IT
;ON THE STACK AND WAITS UNTIL THE PRINTER IS
; READY BY CHECKING WITH CIAICR
;WHEN READY IT PULLS THE CHAR FROM THE STACK
;AND SENDS IT AWAY
;-----

OPR        JSR COUT
           PHA
           LDA #$10
WTLOOP     BIT CIAICR
           BEQ WTLOOP
           PLA
           STA DPR
           CLC
           RTS
```

```
;-----
;-----

ACTIVATE PROGRAM WITH SYS 52992

ENABLE PRINTER WITH % (PERCENT)

DISABLE PRINTER WITH & (AND)

;-----

DPR        = $DD01              DATA PORT B
DDRB       = $DD03              DATA DIRECTION REGISTER
CIAICR     = $DD0D              ;CIA INTERRUPT CHECK REGISTER
COUT       = $F1CA              ;OUTPUT CHAR TO DEV DEVICE
VECOUT     = $0326              ;OUTPUT ROUTINE VECTOR
INTERP     = $A7AE              ;RETURN POINT TO INTERPRETER LOOP
EXC        = $A7E7              ;RETURN POINT TO EXECUTE BASIC
;
;-----
;
           * = $CF00

;-----
 REVECTOR AT $0308 TO JUMP AND CHECK WITH OUR
 ROUTINE FIRST WHEN COMMANDS ARE ENTERED

 -----
           LDA EXTEST
           STA $0308
           LDA EITEST
           STA $0309
           RTS
 -----
 THIS ROUTINE CHECKS IF THE CHARACTER ENTERED
 IS EITHER A % OR A &
 -----

TEST       JSR $0073
           CMP #37              IS THE NEXT CHAR A %
           BEQ OPEN             OPEN PRINTER CHANNEL
           CMP #38              IS IT A &
           BEQ CLOSE
           JMP EXC              IF AFTER ALL THIS NONE OF
 THEM HAVE BEEN FOUND THEN RETURN TO BASIC
```

Basic Listing

```
10 B=0
20 READ A : IF A = -1 THEN SYS 52992:END
30 POKE 52992 + B,A
40 B=B+1
50 GOTO 20
100 DATA169,11,141,8,3,169,207,141,9,3,96,32,115,0,201,37,240,7,201,38
110 DATA240,34,76,231,167,169,72,141,38,3,169,207,141,39,3,169,127,141,13,221
120 DATA169,255,141,3,221,169,0,141,1,221,32,115,0,76,174,167,169,202,141,38
130 DATA3,169,241,141,39,3,32,115,0,76,174,167,32,202,241,72,169,16,44,13
140 DATA221,240,251,104,141,1,221,24,96,-1
```

Analytical Amstrad

*A testing time in store for Chemistry students on the 464 – written by **Roger Welton***

Many examination syllabuses for Chemistry at aged 16+ require students to be able to identify simple salts when given the results of tests on them. This requires quite a lot of practice if the student is to be confident in interpreting the results of such tests.

The aim of this program is to allow you to do this on an Amstrad CPC 464 computer. The program is an adaptation of similar programs seen on other machines but it takes advantage of the Amstrad's window commands to produce a clear and attractive screen display.

The user is asked to choose which one of 40 salts to try to identify. He is then given a short description of the salt and invited to choose a test. The tests used are fairly standard except that the Devarda's Alloy test for nitrate ion has been chosen in preference to the older "brown-ring" test.

The student may choose to guess the identity of the salt at any time. Alternatively, if the student types *Stop* the identity of the salt is revealed and the student may choose another chemical. Help with the interpretation of the tests is given by typing *Help*.

If you find the prospect of typing in this listing daunting, I can supply a copy upon receipt of a blank cassette and £2.50. My address is 9 Tilmire Close, Heslington Lane, York YO1 4NG.

```
[illegible]
```



Lost Adventure

N R Wild of Broseley, Shropshire, writes

Q **I own a Commodore 64 and since buying the cassette version of *The Quill* I have been hidden away in my little room writing adventure after adventure. However, in my latest epic, like a fool, I saved the game into the *Save Adventure* part of the menu and not the *Save Database*. I have tried and tried to retrieve it but to no avail. I have contacted Gilsoft, but no-one there could help me. I would be very grateful if you could help me with this problem. The version of *The Quill* that I have is AO2.**

A Bad news I am afraid. . . unless you keep an old copy of your *Quill* database, you have indeed lost all your work. The *Save Adventure* option saves the interpreter code together with the adventure database, which means that you cannot use the load options of *The Quill* to reconstitute your data.

There seem no real method of retrieving the situation other than starting again. I know that you won't want me to say this but why did you not save the database after you saved the adventure? Anyway whatever the reasoning was I am afraid that the old chestnut piece of advice is going to be trotted out once again. If you are developing a piece of software, using a generator or not, always *Save* to a different cassette (or disc)!

Creshed out

R Sims of Camberley, Surrey, writes.

Q **My setup consists of a 48K Spectrum and interface 1 housed in DK'Tronics keyboards plus one microdrive. I also have a prism Micronet adaptor and an Alphacom 32 printer. Problems seem to occur when running Backgammon or Scrabble. If the adaptor is connected all is OK. If this is disconnected and the printer attached all is still OK. However, if both devices are connected the programs keep crashing – the printer need not be plugged in. I always type *'Rand USR 0'* before loading, any ideas?**

A This seems to be a power supply problem. I can't quite understand why you get this with few games, but I suggest that you get your machine checked. You can test if things are ok before loading by *Poke*ing a high address in Ram (as close to 48k as possible), with a value and then *Peek*ing it to ensure that it has not changed. If the value has changed then you have a Ram problem. If no change has taken place then I suspect the tapes.

Neat conversion

Peter Baker of Reading, writes

Q **How I wish I could find a neat way of going from decimal to binary.**

A The last time I was asked for a *neat* way I got carping letters. All I am going to say this time is that this is just a method!

```
10 INPUT d
20 FOR i = 1 TO 8
30 LET w = INT(d/2)
40 LET b = d - 2 * w
50 LET d = w
60 PRINT AT 9,15-i,b
70 NEXT i
```

This works for all positive integers up to 255. For other integer you are on your own.

Adventure – the final task

The final instalment of Adventure for the QL – written by ***Philip Sproston***

The end is at last in sight! This week we conclude the listing – the final result being a fine arcade adventure for you to while away those non-programming hours

If you would like a copy of the program, but don't have the constitution for all that typing, then send a formatted microdrive to Philip Sproston at Marloes, Borrowby, Thirsk, North Yorkshire, together with £3 60, and he'll return it with the program on

```
[illegible]
```


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C64 bonanza

This week is dedicated to the Commodore 64 – after a relative drought of *Pokes* we have recently been very fortunate to receive a marvellous selection of material, mostly as a result of the excellent work of our regular correspondant Kenneth Devlin in Inverkip He has sent in so much good stuff that I can't squeeze it all into one column but for those that can't wait to see more look out for our *Arcade Addicts Handbook* where you will find Commodore *Pokes* galore and much more besides This week I have also included the promised *Pokes* from Stephen and David Chandler which appear after those from Kenneth

Kenneth has also kindly pointed out a few corrections to Commodore *Pokes* that were printed in previous issues – *Automania* (Vol 4 no 29) *Poke* 2249,9 not 249,9 *Hexpert* (Vol 4 no. 24) *Poke* 21875, 173/ *Poke* 21872,173. *Hovver Bovver* (Vol 4 no 24) *Poke* 38880,96 (lives). *Skramble* (Vol 4 no 24) *Poke* 8609,173 (infinite lives) *Poke* 3808 168/ *Poke* 3809,0/ *Poke* 3810,234 no collisions

Chinese routines

His first new routine is for *China Miner* – yes I know we've done this before but just to illustrate the sort of problems that crop up it seems that the version on the *SoftAid* cassette has a new turbo loader that makes it hard to get into Enter this program.

```
10 T=0: For A=20000 To 20023
Read B Poke A,B T=T+B Next
20 If T<>2493 Then Print "DATA
ERROR" End
30 Data 169, 43, 141 40, 3, 169 78,
141, 41, 3, 86 169 288, 141, 63, 3,
169, 2 141 64, 3 76
40 Data 237 246
```

Type *Run* If *Data Error* appears then check listing Type *New* Then enter this line

```
10 Poke 20001,237 Poke
20006 246 Sys 20000: Sys 678
```

Type *Sys 20000*/ Now press *Shift Runstop* to load the loader program.

Once all the program has loaded an error message will appear on the screen but you ignore this Now enter the following *Pokes* without clearing or scrolling the screen (this is because the machine code is stored in the first ten lines). *Poke* 1053,0/ *Poke* 1055,8/ *Poke* 1056,128/ *Sys* 1082/

Arabian trickery

The machine will appear to reset but do not worry *Poke* 34497,0 to stop collision detection *Poke* 34631,173 infinite lives. *Poke* 34516,169/ *Poke* 34517,6/ *Poke* 34518,234 – no need to collect objects *Sys* 33127 to start running

Arabian Nights This is very tricky to get into, if you try the following do not switch off the speech. *Load* the game as normal. When the title screen appears and the music plays, reset the computer – the music will stop but nothing else will happen. Press *Restore*. Press the joystick fire button. Hold down the *Runstop* key just before the speech for the first screen the machine will return to Basic *Poke* 21934,169 fall from any height *Poke* 22853 173 infinite lives *Poke* 22473,0 no collision on collecting screens *Poke* 22768,168 *Poke* 22769,0 *Poke* 22770,234 for no collisions on raft/flying carpets part *Sys 20636*

Falcon Patrol 2 Enter this short program:

```
10 t=0 For a=2000 to 20037
Read b Poke a,b t=t+b Next
20 If t<>4641 Then Print "data
error".End
30 Data 169, 43, 141 40, 3, 169, 78,
141 41 3 86, 169 169 141 63, 3,
169 256, 141, 4 3 76
40 Data 237 246, 120, 169, 253
169 21, 169, 157, 21, 3 202, 208
247, 88, 86
```

Type *Run* – if *Data Error* appears then check listing Type *New* Now enter this 10 *Poke* 49424,37 . *Poke* 49425,241 *Sys 20024 Type Sys* 20000/

Now press *Shift Runstop* to load the game loader Once the program has loaded press *Return* twice Finally *Poke* 28786,165 for infinite lives *Poke* 36617,6 to make life easy *Sys* 28672 to start

Strangeloop Press *Runstop-Restore* when saving the game position *Poke* 46486,173 lives *Poke* 44217, infinite fuel *Sys 865* to start. *Brian Bloodaxe*: Load as normal and then try *Runstop-Restore* If it doesn't work reset the computer *Poke* 38270 165 infinite lives *Poke* 39079 165 infinite energy *Sys* 39142 – if this does not work try *Sys* 39146 (it depends on when you break the program)

Pyjamarama *Load* "",1,1/ *Poke* 2218,200/ *Poke* 2219,8/ *Poke* 2248,169/ *Poke* 2249,16/ *Poke* 2250,141/ *Poke* 2251,13/ *Poke* 2252,68/ *Poke* 2253,76/ *Poke* 2254,247/*Poke* 2255,9/ *Run*/ *Kong* *Poke* 30624,173 Load game as normal and reset the machine *Poke* 6856,164 *Sys* 2304 *Scuba Dive* · *Poke* 3584,173 *Poke* 19079 173 *Poke* 19080,0 *Poke* 19081,234 *Hunchback* *Poke* 22521,173 lives *Poke* 39282,169 *Poke* 22283,0 *Poke* 22284,234 no collisions *Sys 16384* *Mr Wimpy* *Poke* 21074,173 *Poke* 21091,30 infinite salt, *Poke* 19228,169 *Poke* 19229,0 *Poke* 19230,234 no collisions in first part. *Poke* 26593,169 *Poke* 26594,0 *Poke* 26595,234 no collisions in second part

Bounty Bob Strikes Back: Type *Load* and when ready appears type *Poke* 1010,78 *Poke* 1011,248 *Poke* 1012,252 and then type *Run* When loading finishes again type *Poke* 29719,169 · *Poke* 29720,0 *Poke* 29721,141 *Poke* 26722,110 *Poke* 29723,0 then type *Sys* 11677 and you are invincible On level 1 after getting coffee pot type 8 and press F7 to go to level 8, after getting flower pot type 1 and press F7 to go to level 4 On level 10after getting the pitchfork type 5 and hit F7 to go to level 14



Bounty Bob: US Gold strikes back

(lives) *Poke* 7760,96 removes link screen *Sys 12128* *Skramble* *Poke* 8609,173 (lives) *Poke* 3808,168 *Poke* 3809,0 *Poke* 3810,234 – no collision *Spacewalk*: *Poke* 52939,160 *Poke* 21295 169 *Poke* 21297,0 *Poke* 21298,234 *Poke* 21210,129 *Poke* 21211,0 · *Poke* 21212,234 – infinite lives

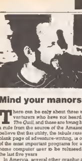
Jungle story

Jungle Story: *Poke* 52959,160 infinite lives *Orbitron* *Poke* 52960,169 *Poke* 52961,0 *Poke* 52962,234 lives. *Chiller*: Load as normal and press *Run/Stop* *Restore* *Poke* 32967,173 for infinite energy and *Sys* 50768

Cylu: *Poke* 39409,173 infinite fuel *Hungry Horace*.

Suicide Express As above *Load* *Poke* 1010,76 *Poke* 1011,248 *Poke* 1012,252 and then *Run* *Poke* locations 26222 up to 26226 with 234 *Poke* 26227,243 *Sys* 33792 *Daley's Decathlon* On the javelin hold down fire and run as normal Still holding fire The javelin will go straight up and a spaceship will come down *Frak*: When you get a high score type *American Express* while *shiftlock* is switched on to get the cheat mode. *Booty*. Hold down K,E,V,I,N and you can than press the back arrow to change levels.

Tony Kendle



Mind your manors

There can be only about three adventurers who have not heard of *The Quill*, and those are living half a mile from the source of the Amazon I believe that this utility, the *tabula rasa* or blank page of adventure-writing, is one of the most important programs for any home computer user to be released in the last five years

In America, several other graphic adventure writers have been released, although as far as I have seen, these are attractive but fairly useless for serious players

The problem with early version of The *Quill*, and one which most reviewers have seized upon with glee, is the fact that most *Quill'd* adventures tend to look the same – once you've seen the typical *Quill* response (*You have with you nothing at all* and *OK Bye have a nice day*) then there are no more surprises

Since its release some two or three years ago Gilsoft has produced a number of up-dates for the program, the first of which was Serial C This is the version that new purchasers of the program will receive, but is also available as an update for just £2 99 to anyone who still has the original tape Version C goes some way toward allowing the author to customise the responses within the adventure

Static illustrations

The second advance was *The Illustrator*, as the graphics-creating part of *The Quill's* suite of programs This utility costs as much as the main program, but transforms the basic database A sophisticated graphics editor allows the writer to create static illustrations to accompany *Quill* locations or create title screens Even so, there is still some inflexibility here, the picture can be quite slow to draw, and once complete, the player must then press a key in order to get on to the text part of the game (and quite often, isn't let in on his secret!)

Now the limitations of both The *Quill* and *The Illustrator* have been largely answered by the latest release from Gilsoft called *The Patch* This allows the programmer to use a split screen, choosing the ratios of graphic to text (the picture will scroll up as you input text), and also offers several ready-made sound effects as well as one or two character sets Other facilities include save-to buffer and editing of some of the system messages

As it is only the alternative typefaces that use up the memory, you can see that this is going to be a necessary adjunct to *The Quill*. It'll cost you £5 99, and works, of course, with the main *Quill* and *Illustrator* programs

With prices for the main programs running at £17 each (£23 for the Commodore and Amstrad disc versions), the whole suite is not cheap But with them the imaginative author can produce a sophisticated adventure that will stand up to any others on the market

There's an exciting new adventure development program from the Ram Jam Corporation, but it is only available to software houses and those writers with a good idea, which allows for graphics, sound and roving characters

For Amstrad owners, Incentive has just this week released *The Graphic Adventure Creator* which would appear at first to be an excellent utility More of it soon

So that's the package – how has it been used recently? That's the question that I shall be concentrating on in the next couple of weeks, and if I hear a groan, then all I can say is 'Read on, because there are some smashing programs about!'

A couple of new adventures to be released by Gilsoft are *The Hollow*, again from Tom Davies an excellent writer, and *Madcap Manor* written by those Mindbenders, Paul Styles and Brian Jenkinson. An innovation here is the fact that both graphic and text versions are offered, one on each side of the cassette

Madcap Manor

The two versions of *Madcap Manor* are similar in most respects, except for small detail changes – for example, the found objects are rather different, and some of the more complex problems are missing in the graphic version, due no doubt to the extra memory required to service the excellent graphics, drawn by Steve Green.

Falling asleep one day, you dream that you are miraculously transformed into Inspector Le Glas, the famous Belgian detective Starting off, you find that coming straight from your bed, you must find some clothes, and then you can explore the Manor See! Mrs Crumble the cook relaxing with her sherry trifle! Play *Swan Lake* on the Music Room's grand piano! See Fleet the butler's rude tattoo!

Madcap Manor is the home of great looniness, and this is made even worse by the characters wandering about, with whom you can hold conversations and gain clues as to what is going on – the closest yet to character inter-reaction in a *Quill'd* adventure The logic, however, sometimes goes awry (I was able to start the engine of the car in the garage before finding the starting handle)

The Hollow, on the other hand, appears to be a completely different game on each side of the cassette, so must also rate as good value The player is required to find the remaining seven pieces of magical medallion while travelling in the mystical land of Moylan (you start with three pieces) Tom Davies, an adventure writer whose programs I have admired for years, has dreamt up a scenario which uses very long and atmospheric descriptions throughout – I didn't find the adventure itself particularly atmospheric, but this may be because I haven't yet progressed very far, being held up by the necessity of finding a spell to get past a very strange bird.

The graphic version boasts very colourful and very fast graphics, by Tom himself, and good points include the fact that you can ask for *Help* and for once get quite a detailed clue to the particular problem worrying you at that location. Uniquely, the player is offered an easy way to progress, or a hint at the correct solution which may be rather harder to figure out The program makes full use of the graphics, and the player can ask for a redescription in text only, or with the graphic, and pictures can be drawn only at the first visit to a location, or at every visit There are some bad points – surely the program should say *I don't understand* when it actually says *Doing that is of no use to you?* That's being clever!

However, these are a couple of new good-value adventures from the home of *The Quill*, and they should give even experienced players a few weeks hard thinking

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Bubbling Under

ACE/Spectrum/C64/C16 (Cascade), Kennedy Approach/C64 (Microprose/US Gold), Monty On The Run/C64/Spectrum (Gremlin Graphics), One Man and His Droid/Spectrum (Mastertronic), Quest For the Holy Grail/Spectrum (Mastertronic), Soul of a Robot/Amstrad (Mastertronic), Robin of Sherwood/Various (Adventure International)

All figures compiled by Gallup/Leisurescope

Top Twenty

1	(1)	Way of the Exploding Fist *(Spectrum/C64/Amstrad)*	Melbourne House
2	(–)	Impossible Mission *(Spectrum/C64)*	Epyx/US Gold
3	(2)	Frank Bruno's Boxing *(Spectrum/C64/Amstad)*	Elite
4	(10)	Hacker *(Spectrun/C64/Amstrad/Atari)*	Activision
5	(12)	Finders Keepers *(Spectrum/C64/Amstrad)*	Mastertronic
6	(–)	Who Dares Wins II *(C64)*	Alligata
7	(19)	Formula One Simulator *(Spectrum/C64/C16)*	Mastertronic
8	(4)	Daley Thompson's Supertest *(Spectrum)*	Ocean
9	(5)	Fighting Warrior *(Spectrum/C64)*	Melbourne House
10	(9)	Shadow Of The Unicorn *(Spectrum)*	Mikro-Gen
11	(3)	Fairlight *(Spectrum)*	The Edge
12	(13)	Summer Games II *(C64)*	Epyx/US Gold
13	(15)	Action Biker *(Spectrum/C64)*	Mastertronic
14	(17)	BMX Racers *(Spectrum/C64/C16)*	Mastertronic
15	(14)	Graham Gooch's Test Cricket *(Spectrum/C64)*	Audiogenic
16	(7)	Spy vs Spy II *(C64)*	Beyond
17	(–)	World Series Basketball *(Spectrum/C64/)*	Imagine
18	(–)	Beach Head *(Spectrum/C64/Amstrad/BBC/Atari/Electron)*	Access/US Gold
19	(11)	Bored Of The Rings *(Spectrum/C64/BBC)*	Silversoft
20	(5)	Now Games *(Spectrum/C64)*	Virgin

Figures compiled by Gallup/Leisurescope

Readers' Chart No 48

1	(1)	Way of the Exploding Fist *(Spectrum/C64/Amstrad)*	Melbourne House
2	(5)	Fairlight *(Spectrum)*	The Edge
3	(4)	Now Games *(Spectrum/C64)*	Virgin
4	(2)	Daley Thompson's Supertest *(Spectrum)*	Ocean
5	(6)	Summer Games II *(C64)*	Epyx/US Gold
6	(3)	Hypersports *(Spectrum/C64)*	Imagine
7	(–)	Red Moon *(Spectrum/C64/BBC/Electron/Amstrad)*	Level 9
8	(8)	Soft Aid *(Spectrum/C64)*	Various Artists
9	(7)	Frank Bruno's Boxing *(Spectrum/C64/Amstrad)*	Elite
10	(–)	Karateka *(C64)*	Broderbund/Ariolasoft

Winning phrase No 48 "Fifty-one shopping days till Xmas, dear", from D Shanson of Palmers Green, London, who receives £25. Honourable mentions to J Burnett of Camberley, Surrey with "Eire's polar expedition hoists flag at Southend" and Peter Leicester of Sale, Cheshire with "Sexpot Selina plays footsie with Andy"

Now voting on week 50 – £25 to win

Each week *Popular* is compiling its own special software top ten chart – compiled by YOU

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You can still vote in the chart without making up a slogan – but you won't be in with a chance of winning the prize

All you have to do is fill in the form below (or copy it out if you don't want to damage your magazine) and send it off to Top 10, *Popular Computing Weekly*, 12-13 Little Newport Street, London WC2H 7PP

Voting for Week 50 closes at 2pm on Wednesday November 6 1985. Entries received after that time will not be eligible for inclusion in that week's voting. The judges decision is final. Only one entry per individual per week will be allowed.

Name ....

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My top 3: Voting Week 50

1..

2..

3..

My phrase is: ....

New Releases

MYTHIC BEAST

Shadow of the Unicorn, not a mythical program at all, has turned up. This is the first program to use MikroGen's new *Mikro Plus* interface which gives you a tape test utility, a joystick port and an extra 16K. This ought to give you bigger games with more and more detailed graphics.

Little wonder then that *Shadow of the Unicorn* is a large adventure with lots of graphics. It seems to be a hybrid of dozens of other games: the characters have a similar style to *Wally* games, you control multi players like *Midnight*, many of the backgrounds look like *Valhalla* and you can look in various directions à la *Tir na Nog*. You get a book telling the story of baddies and goodies which reads like the usual fodder of pseudo-myth and mystic runes.

First impressions of the game were pretty disappointing, the graphics are nowhere near Gargoyle standard, and the backgrounds are pretty basic looking in places. The animation is also nothing beyond what you might see in the average budget game. Though the adventure is clearly big it isn't for example any bigger than *Midnight* – a lot smaller in fact.

If that extra memory is being used anywhere it must be in the logic and gameplay. I found some evidence for this in the small amount of time I could spend on the game. There are lots of interesting locations and odd characters (most of whom I have slaughtered so far) so I think it may, in the end, prove to be a fairly compulsive complex game. An immediate Gosh Wow it isn't, though.

Program *Shadow of the Unicorn*
Price *£14.95*
Micro *Spectrum*
Supplier *MikroGen, Unit 15, Western Centre, Bracknell*

EASY PLAY

Camel Software has recently issued a music program for the Amstrad called *Toolbox 2*. It differs from other music programs in its intention – not to teach you much about music but simply to get you in the position of playing music quickly and easily.

It gives you the chance to play your Amstrad in a similar way to those Casio 'one key' facilities where after recording the sequence of notes you require, you then time them by pressing a single key in step with a rhythm unit. Each press of the key 'releases' a note of the tune. This facility is available on all three sound channels of the Amstrad and so a three part tune is possible.

There are other facilities like transposition and a preset rhythm and altering the sound timbre has been kept to the business of fiddling with the envelope shape.

It's quite a well designed package and for those with no knowledge of music is a relatively cheap buy.

Program *Toolbox 2*
Price *£5.95*
Micro *Amstrad*
Supplier *Camel Micros, Wellpark, Willeys Ave, Exeter*

Pick of the week

DISC DRIVEN

Tron was the great SF Christmas movie of about three years ago, and was probably one of the first films to produced spin-off video arcade machines. To my knowledge it produced two – one simply entitled *Tron* (a compilation of four 'sub-games') and more relevantly here, one entitled *Discs of Tron*. This one was a 'Walk-in' machine where you sat down in semi-darkness, were bombarded by stereo sound and proceeded to play a game against the computer which can only be described as duelling by playing a cross between squash and frisbee. This was fun – and at last it has found its way onto a home computer in the shape of a new one from Artic called *Discs of Death*.

Programmer Ian Rich has done a great job, considering the limitations of the Spectrum. The 3-D perspective is good, and although the graphic display doesn't look impressive, what is important is that the game plays very well indeed. There are three skill levels... don't start on number three – it's fast!

At £6.95 perhaps it's not quite as competitivly priced as it might have been, but if you are looking for an original and challenging arcade game, this could be it.

Program *Discs of Death*
Price *£6.95*
Micro *Spectrum*
Supplier *Artic Computing, Main Street, Brandesburton, Driffield*

Program	Type	Micro	Price	Supplier
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Physics Revision	Ed	Amstrad	£14.95	Amsoft
Formula	S	Amstrad	£1.99	Mastertronic
Chemistry Revision	Ed	Amstrad	£14.95	Amsoft
Web War	Arc	BBC	£9.95	Mirrorsoft
The Worm in Paradise	Ad	Commodore 64	£9.95	Level 9
Mission Asteroid	Arc	Commodore 64	£14.95	US Gold
Skooldaze 64	Arc	Commodore 64	£6.95	Microsphere
Scrabaeus	Arc	Commodore 64	£9.95	Ariolasoft
Underbeings of Croth	Ad	Dragon 32	£3.95	Maridan
Mazerace	Ed	Dragon 32	£3.95	Maridan
Spellbox	Ed	Dragon 32	£3.95	Maridan
Mordon's Quest	Ad	Enterprise	£7.95	Enterprise
Star Strike 3D	Ad	Enterprise	£7.95	Enterprise
Jet Set Willy II	Arc	MSX	£7.95	Software Projects
MSX Pastfinder	Arc	MSX	£11.95	Activision
Accounts	Ut	PCW8256	£99.95	Sagesoft
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ON THE ROAD

I'm not going to spend too much time talking about *3D Grand Prix* – one of the new Amsoft Gold range for the Amstrad machines. We've all seen what the Amstrads can do when programmed well – viz Ultimate/Gargoyle and many others – it's such a pity that there is such a lot of overpriced dross for them – some of it produced by Amsoft itself.

Amsoft clearly regards 3D Grand Prix as 'something a bit special', so when it arrived on my desk, it was up and running faster than you can say 'you cannot be serious'. Now I'm a 1 27 *Revs* man myself quite a coincidence really, as it took exactly that long to realise exactly how unplayable *3DGP* was

I persevered – it got worse None of the excitement of *Pole Position* – there is no impression of speed and challenge None of the realism of *Revs* – the car manoeuvres like a tank and the opposition are more like moving brick walls There is some pretty background scrolling – but what's the use of the icing if there isn't a cake to put it on in the first place? I think everyone concerned would do well to forget about this one

Program *3D Grand Prix*
Price *£9 95*
Micro *Amstrad CPC's*
Supplier *Amsoft*
Brentwood House
169 Kings Road
Brentwood
Essex
CM14 4EF

MAKE MUSIC

When the MSX machines started appearing here the only one I managed to raise any enthusiasm for was the Yamaha CX5 MSX Synthesiser This wonderful machine lets you create music in up to eight parts using the same sort of sound techniques utilised in the famous in the famous DX7 – which just about everybody from James Last to Philip Glass has at least two of

It seems though that even the CX5 hasn't been doing too well and if you look around you'll find some excellent discounts fo the specialist music shops Having had one for a while I can only suggest that if you like making music you go out and buy one immediately

The justification for all this blurbage is the fact that Rittor Music have released a music writing package for the CX5 which would seem at first glance merely to duplicate what's available on Yamaha's own *Composer* cartridge

In fact the *FM Musiwriter* is a rather different entity, which turns the CX5 into a flexible Casio rather than a tool for serious composing This has some good as well as bad aspects but certainly the package does not use the machine to the full

Bad points first, you are stuck with 3/4 or 4/4 as a rhythmic choice (where would this leave Stravinsky?) You cannot use sounds you have created yourself and are stuck with the sometimes dodgy presets, and you have to use fixed chords – your own notated music has to be monophonic

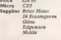
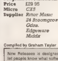
On a machine capable of



almost infinite musical variety using eight notes, it seems absurd that it should be so restricted. However the package does have one obvious advantage – it is a lot easier to use than the *Composer* program precisely because you don't have to insert each chord or write in the percussion parts.

The program is divided into four sections, editing of the score where you insert the actual notes, bar divisions, key signatures, etc Page Two concerns rhythm and repeats Rhythm is the usual mixture of Casio/home organ sounds – Disco, Waltz, etc, a marginal improvement over the CX5's existing presets. There are similar pages for chords and overall music parameters like key signature and tempo

Instructions like *Play A7* or *Switch* on *Waltz rhythm* are inserted onto the score at the appropriate place Although it is easy to use and the manual is also clear, the end results tend to have a sort of home organ feel about them, probably because of those rhythms, so if it's Philip Glass Polyrhythmic density you're after forget it If you feel in need of a very basic, very helpful package that will do a lot of musical work for you, albeit with slightly bland results, this is worth looking at

Program *FM Musiwriter*
Price £29 95
Micro *CX5*
Supplier *Rittor Music*
24 Broomgrove Gdns.
Edgeware
Middx

Compiled by Graham Taylor

New Releases is designed to let people know what software is coming on the market If you have a new game or utility which you are about to release send a copy and accompanying details to New Releases, *Popular Computing Weekly*, 12 13 Little Newport Street, London WC2H 3LD

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Intelligent woman

George Bernard Shaw found a mass market for his plays and philosophy, and he suggested that part of his success was due to pitching his arguments so that they would be understood by an imagined 'typical' reader

That reader he described as 'an intelligent woman', and he even wrote a pamphlet entitled *The Intelligent Woman's Guide to Socialism* which, despite the title, was intended to be read by everybody

Perhaps the home computer industry could benefit by copying Shaw and appealing to the 'intelligent woman' it may be the only way to avoid the depressing fate of becoming just another specialist male interest with an ever-dwindling band of loyal devotees

There is absolutely no evidence to indicate that the microcomputer industry as a whole gives a moment's thought to its almost exclusively masculine appeal, but should it do so it would see the inevitability of the current "boy's toy" image. Homicidal aliens, fighter aircraft simulations and warlock armies all appeal directly and unapologetically to the youthful male imagination. It is a strange fate for the mathematically pure and sexless counting engine that is the microchip

When the copywriting hacks first undertook to awaken consumers to the wonders of microtechnology all sorts of promises were made on behalf of computers. What was not taken fully into account was that a typical system of computer, tape recorder and television was good for almost nothing except playing arcade games

The last 18 months have seen the inexorable ascent of the computer game. Clever machine code, links with personalities from the entertainment world and multi-thousand pound marketing have attracted a public who think they are 'computing' when in fact they are only playing games. Home computers are the most exciting development in entertainment since the invention of television, but playing games should not be seen as something special just because it involves a computer, and home computers should not be seen as purely games machines for teenage boys

In response to mild protest from alienated women, some software houses issued programs specifically aimed at the 'female' market, but computerised cooking and silicon chip knitting patterns have rightly been exposed as patronising as well as a waste of time

However, just when home computing appeared to be resigning itself to becoming an essentially masculine hobby, a radical change in direction took place

The market has stopped expanding outwards and has now started to move upwards, home computers have become useful. The latest machines – like the Amstrad 8256 – have large memories, fast storage, reliable hardware and free business software

Price cuts have now put computer/disc/monitor/printer packages within the reach of most pockets

The result is a substantial increase in computer ownership from people who would not consider themselves to be computer literate, but who nevertheless have a use for wordprocessors, spreadsheets and databases and who may even be tempted eventually into buying a chess game or a good adventure

The functional computer system, then, is the trend which is developing from the hiatus of the last year and a half

Computers are at last beginning to appeal to the intelligent woman.

Mike Lloyd

Dicey business

Puzzle No 181

In the 'ghost' sum below, a two-digit number is multiplied by a single-digit number. To the resulting two-digit product is added another two-digit number which gives a final result also of two digits

```
 * * × (times)
   *
 ---
 * * + (plus)
 * *
 ---
 * *
 ---
```

If the stars are replaced by the correct digits it will be found that each of the nine digits 1 to 9 has been used once and once only

Can you fill in the correct values?

Solution to Puzzle No 176

For any given starting point, counting round the circle of cards as described, a specific score would be achieved. The program below tests each of the possible 144 starting positions and prints out each respective score. If these results are examined it will be seen that the only score that is duplicated by consecutive start points is a score of six. (The start points are 15 and 16, 32 and 33, 111 and 112, and 128 and 129.)

```
10 DIM C(144),S(144)
20 FOR START=1 TO 144
30 FOR N=1 TO 144:C(N)=N:NEXT N
40 PS=START
50 IF C(PS)=0 THEN GOTO 100
60 M=C(PS):C(PS)=0:S(START)=S(START)+1
70 PS=PS+M
80 IF PS>144 THEN PS=PS-144
90 GOTO 50
100 NEXT START
110 FOR N=1 TO 144:PRINT N,S(N):NEXT N
```

This does not determine my age exactly, but this was not asked for!

Winner of Puzzle 176

The winner is Dan Macleod of Dingwall, Ross-shire, who receives £10

Rules

The closing date for Puzzle 181 is November 27

The Hackers

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